



National Aeronautics and
Space Administration

Jet Propulsion Laboratory
California Institute of Technology
Pasadena, California

AIRS EPO

EDUCATION & PUBLIC OUTREACH

Sharon Ray
SCIENCE TEAM MEETING
10/9/2007

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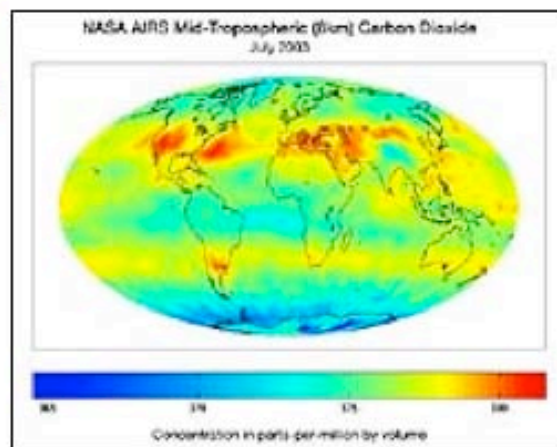
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AIRS Global Map Of Carbon Dioxide F

14

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AIRS Global Map Dioxide From Sp

Environment (tags: car
environment, globalwa

Erika - 129 da

Atmospheric Infrared S

instrument on NASA's

also being used by scientists to

atmospheric carbon dioxide

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AIRS OUTREACH

IMAGE RELEASE - AIRS GLOBAL MAP OF CO2

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Press Release

M3GA V 7.0 :: CLIMATE changelog :: Dialog :: CO2

Page 1

Author

Deborah

senior member

★★★★

member is offline



Joined: Dec 2003

Posts: 746

Location: East Coast

Topic: CO2 (Read 267 times)

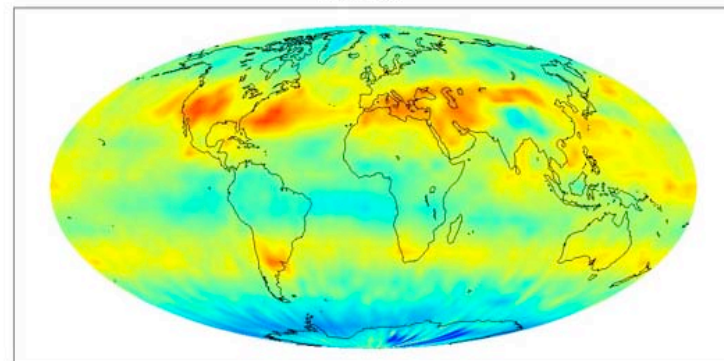
CO2

Thread Started on May 28, 2007, 5:30am >

AIRS Global Map of Carbon Dioxide from Space

http://airs.jpl.nasa.gov/index.cfm?fuseaction=ShowNews_DynamicContent&NewsID=10

NASA AIRS Mid-Tropospheric (8km) Carbon Dioxide
July 2003



Concentration in parts-per-million by volume

NASA AIRS Mid-Tropospheric (8km) (4.96 mi.) (approx. 26,000 ft.) Carbon Dioxide
July 2003



National Aeronautics and
Space Administration

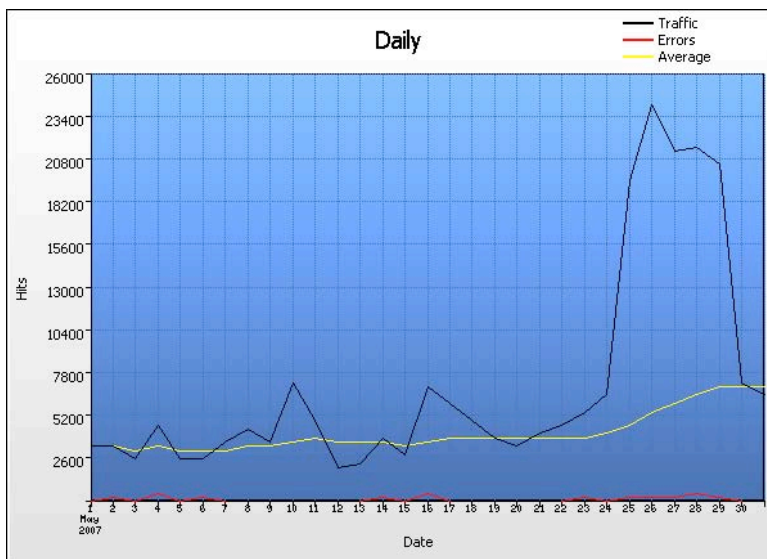
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Pasadena, California

AIRS OUTREACH

IMAGE RELEASE - AIRS GLOBAL MAP OF CARBON DIOXIDE

The first image release of an AIRS carbon dioxide image occurred on May 18. The story was featured on the NASA home page as well referenced from the JPL home page, JPL Earth page, and it also appeared on the Space Daily, Terra Daily web sites.

<i>AIRS Web Site</i>	April	May
Visitor Sessions	6,989	10,034
Unique Visitors	1,926	3,587

[Advanced Search](#)
[Preferences](#)

Web

Personalized Results 1 - 10 of about 310,000

[Globalis - an interactive world map](#)

Greenhouse gases, primarily **carbon dioxide** (CO₂), methane and water ... This **map** shows the impact from the human society on the ecosystems of the world. ...

[globalis.gvu.unu.edu/](#) - 8k - [Cached](#) - [Similar pages](#)

[NASA - AIRS Global Map](#)

This global **map** of mid-troposphere **carbon dioxide** shows that despite the high degree of mixing that occurs with **carbon dioxide**, the regional patterns of ...

[www.nasa.gov/multimedia/ imagegallery/image_feature_833.html](#) - 25k - [Cached](#) - [Similar pages](#)

[National carbon dioxide \(CO₂\) emissions per capita - Maps and ...](#)

Shows various countries and their levels of CO₂ emissions per capita. Also indicates the difference from high income to low income nations on CO₂ output.

[maps.grida.no/go/graphic/national_ carbon_dioxide_co2_emissions_per_capita](#) - 20k - [Cached](#) - [Similar pages](#)



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AIRS OUTREACH

PRESS RELEASE - NEW NASA AIRS DATA TO AID WEATHER, CLIMATE RESEARCH

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Phoenix to the pad



The Phoenix lander
bound for Mars is
hailed to Cape
Canaveral's pad 17A on
July 23 for installation
atop the Delta 2 rocket
that will propel the
craft on its cruise from
Earth to Mars.

- [Part 1](#) | [Part 2](#)

Dawn waits for date



The Dawn spacecraft is
returned to a
processing facility to
await a new launch
date. The mission was
delayed from July to
September, prompting
the craft's removal
from the Delta rocket
at pad 17B.

- [Part 1](#) | [Part 2](#)

Spacewalk highlights



This highlights movie
from the July 23
station spacewalk
shows the jettisoning

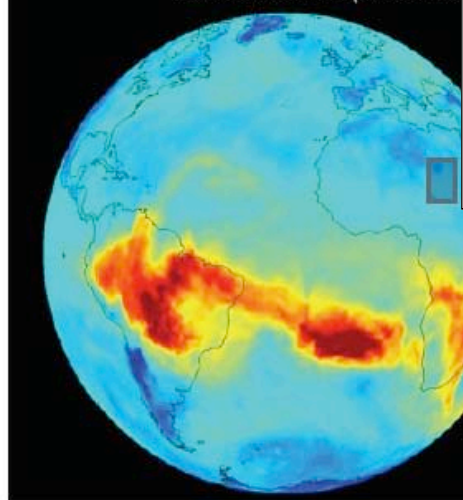
New NASA data to aid weather, climate research

NASA/JPL NEWS RELEASE

Posted: July 25, 2007

There's an old saying, "You can't see the forest for the trees." When it comes to global climate change, it's not hard to spot the "trees" -- they're in the news headlines nearly every day. However -- that is, to gain a more complete understanding of the climate variations we're seeing -- we need to use satellite remote sensing. With these technologies, we can directly measure factors that affect our climate, such as water vapor and other greenhouse gases, ozone and concentrations of airborne dust. Scientists feed these data into computerized climate models to project how our climate will change in the future.

Total Column CO (molecules/cm²)



AIRS map of carbon monoxide. Credit: NASA/JPL

A key contributor to this new generation of climate change research tools is the Atmospheric Infrared Sounder, or AIRS, instrument on NASA's Aqua spacecraft. Developed under the direction of NASA's Jet Propulsion Laboratory, Pasadena, Calif., AIRS measures the key atmospheric gases affecting climate. It's the first in a series of planned advanced infrared sounders that provide accurate, detailed atmospheric measurements for weather and climate applications. Its

STS-118 patch

This is the official
astronaut patch of
space shuttle
Endeavour's
STS-118 mission to
the International Space
Station. The crew features
Barbara Morgan, the former



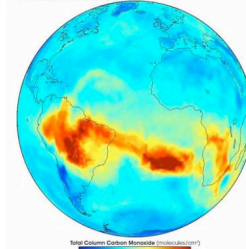
GeoSinam's Blog

This is the blog of a modern day Cartographer. Brown into the business world. Over the course of my journeyman's career I have encountered through positions in government, news agencies, consulting corporations and major start-ups. The hard-earned working theory I have developed is simple. In life, communication is hard work. In business, effective communication is critical. Hence, this blog is the thoughts and musings that parallel the GIS Business practices on www.GeoSinam.com.

FRIDAY, AUGUST 31, 2007

World Perspective - Global Carbon Issue

Taken from
Global Carbon Monoxide in September 2005



NASA's photo collection, with an animated link to the time-flow display of high levels of carbon monoxide on a global scale.
Click here to view animation (9840 kb) - yet another reminder everything has its impact.
Short Excerpt (taken from story - full link below):

About Me



Name:
Sinam Al-Khatatji
Location:
Delray Beach, Florida,
United States

Sinam Al-Khatatji joined DayJet as a founding member in December 2002, with the responsibility for launch market planning, customer analysis, and maintaining DayJet's Jet-Atlas geo-data warehouse. Currently, Sinam is Manager of the Market Analytics & Planning (MAP) unit, supporting multiple company-wide efforts in DayJet's marketing, sales, customer service, advanced technology, and finance departments. Prior to DayJet, over the course of a journeyman's career Sinam has held mid-level positions with the USDA, Reuters, consulting firms, real estate businesses and major start-ups. Sinam is classically trained in GIS with a master's of science degree from George Mason University, and a bachelor's degree in Communications and video production from Penn State University.

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[Amazon vs. Nile](#)

over 350,000 feet. This 3 DVD collection contains over 10 hours of material, the largest ever assembled and will allow you to experience the proud legacy of the X-15.



technology experts, all at
the 2007 AGU User

PLANETARY NEWS: EARTH (2007)

AIRS DATA TO AID WEATHER AND CLIMATE RESEARCH



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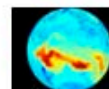
+ For Researchers

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+ LIFE ON EARTH

+ HUMANS IN SPACE



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Infrared Instrument Aids
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Finding Smooth Air
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NASA at AirVenture 2007
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Managers Review
Endeavour Readiness
[+ Space Shuttle Section](#)



07.25.07
Space Station Science
Update





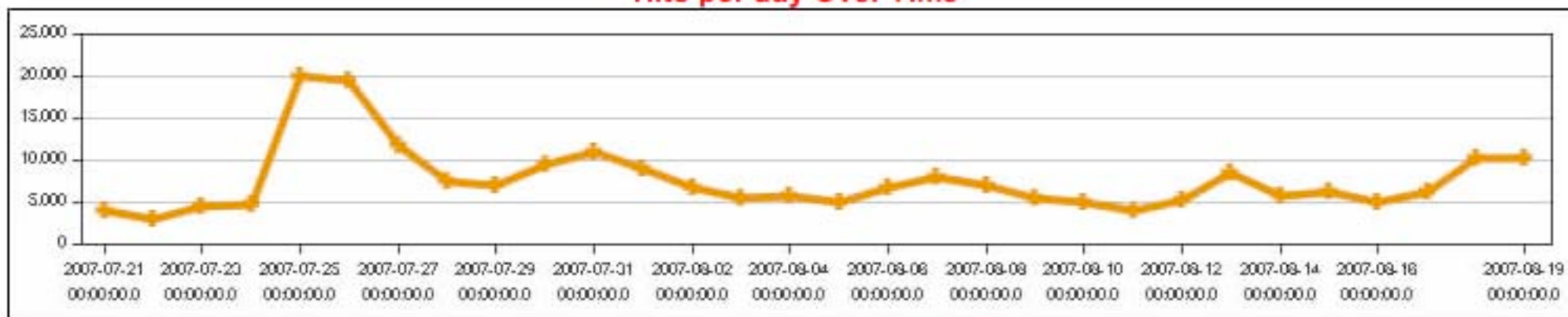
PRESS RELEASE - *New NASA AIRS Data to Aid Weather, Climate Research*

Describes newly released AIRS measurements which includes better temperature and water vapor profiles; profiles of carbon monoxide, methane and ozone; and warning 'flags' to identify concentrations of sulfur dioxide and dust.

- In the two weeks since the V5 release announcement (07/25/07), more than 40 people registered through our online AIRS Data User Registration form.

<i>AIRS Web Site</i>	June	July
Visitor Sessions	9,878	12,174
Unique Visitors	2,484	3,505

Hits per day Over Time



+ NEWS ARCHIVES

[+ More NASA Facts...](#)

[+ More NASA Facts...](#)

- + For Kids
- + For Students
- + For Educators
- + For Media & Press
- + For Researchers
- + For Industry
- + For Employees

+ EXPLORING THE UNIVERSE

Three small thumbnail images arranged vertically. The top image shows a sunset over a body of water with a bright sun low on the horizon. The middle image is a satellite map of a typhoon, showing a swirling pattern of clouds in shades of yellow, orange, and red. The bottom image shows a person's head and shoulders as they look at a computer screen, with their hand resting on the desk.

+ More Life on Earth Features

+ More Humans in Space Features

+ More Exploring the Universe Features

ROCKING INDIANS



NO catch. NO charge. NO kidding!



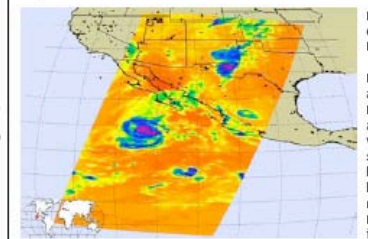
In Search Of Severe Weather.



My name is Robert Stormer and I am a Marine Salvage Specialist and Maritime Severe Weather Spotter. Chasing maritime weather systems is something that well, just comes with the job. I fell in love with the dangerous and awesome power of mother nature a very long time ago and now chase and spot shore-side severe weather systems on my off time. Remember, safety first always!

[View my complete profile](#)

Update On Hurricane IVO and TD



Infrared Sounder instrument on NASA's Aqua satellite. Ivo is expected to weaken to a tropical storm later today and make landfall in the Gulf of Mexico as a tropical storm some time on Monday, Sept. 24. The image, taken at 10:30 a.m. EDT Sept. 21, shows large areas of strong convection surrounding the storm (in purple).

Image credit: NASA/JPL

[+ Larger view](#)



AIRS RAPID RESPONSE - THE 2007 HURRICANE SEASON (8/15 to present)

- 64 web pages on AIRS web site to date
- 20 hurricanes/typhoons/tropical storms
- 4x lead image on JPL Home Page
- 22x lead image on the NASA Hurricane Portal

- ALMOST 8% OF ALL NASA-WIDE WEBSITE TRAFFIC WENT TO THE HURRICANE PAGE FOR THE MONTH OF AUGUST
- 96% HURRICANE TRAFFIC WAS FOR HURRICANE DEAN
- 66% of traffic went for Shuttle and 9.5% went for ISS.
- OF THE 18 IMAGES USED FOR NASA HURRICANE DEAN COVERAGE, 8 WERE FROM AIRS

• AIRS Web Site: June (no hurricane coverage) vs Aug (hurricane coverage)

<i>AIRS Web Site</i>	June	August (8/15-8/31)
Visitor Sessions	9,878	14,485
Unique Visitors	2,484	4,251



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AIRS WEB SITE

- AIRS Data Video on home page
- more flash videos
- split Videos/Animations
- scientist profiles
- Skew-T
- Climate section
 - Focus on climate modelers
- Publication Database


AGU

- NASA Booth
- 4'x6' Plasma Screen
- 2x Community Plasma Screens
- 2x "In-Booth" talks

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[+ View the NASA Portal](#)

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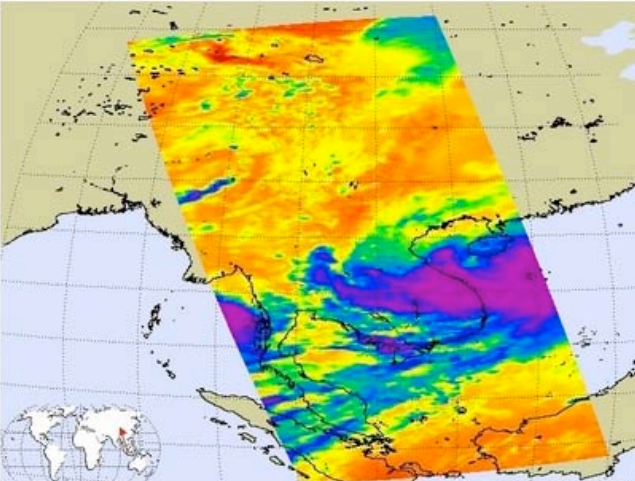


AIRS

Atmospheric Infrared Sounder


Measuring Earth's atmosphere to advance our knowledge of weather and climate

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Typhoon Lekima Reaches South China


Typhoon Lekima makes landfall on Tuesday in south China's island province of Hainan. AIRS views the storm with its infrared, microwave and visible sensors. [Read More >>](#)




Weather




Climate




Science Team Meeting
October 9-12



Scientists
talk about
AIRS data



Ask AIRS

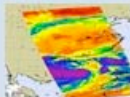


Data Users
Registration


Most Visited:

1. Daily Maps
2. Home Page
3. Hurricane Ioke
4. Hurricane Debby
5. Hurricane Florence

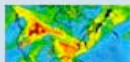
AIRS News



Tropical Storm Lekima
Born in the South China Sea, AIRS captures tropical storm Lekima as it heads toward the southern island province of Hainan.



Fires in Greece As Seen by the Atmospheric Infrared Sounder - A Four-Day Time Series Visualization
The carbon monoxide signature from the fires in Greece that occurred in August of 2007 is revealed in data retrieved by the Atmospheric Infrared Sounder, AIRS.

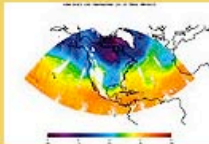


Carbon Monoxide Transport Around the Globe, July 20 through August 28, 2007
This visualization made from data collected by the

Weather Snapshot:

1. Typhoon Krosa
2. Tropical Depression Melissa
3. Typhoon Lekima
4. Tropical Storm Juliette
5. Hurricane Lorenzo

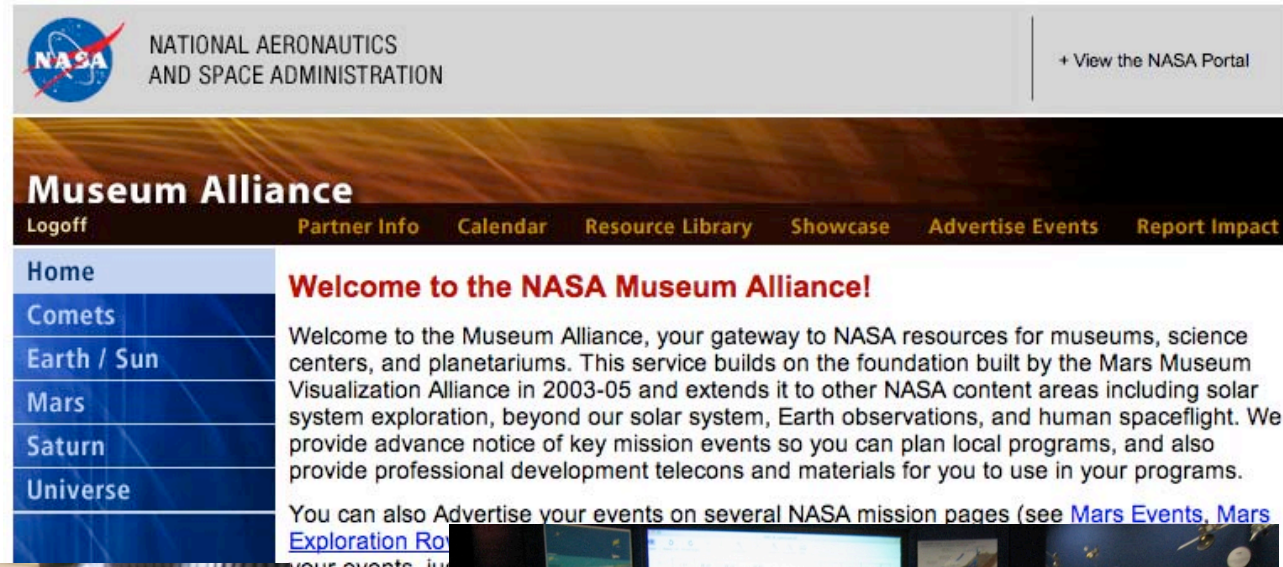
AIRS Maps



Daily Weather Maps



- **Earth Science Career Night**
- **Museum Alliance**
- Eric Fetzer & Duane Waliser



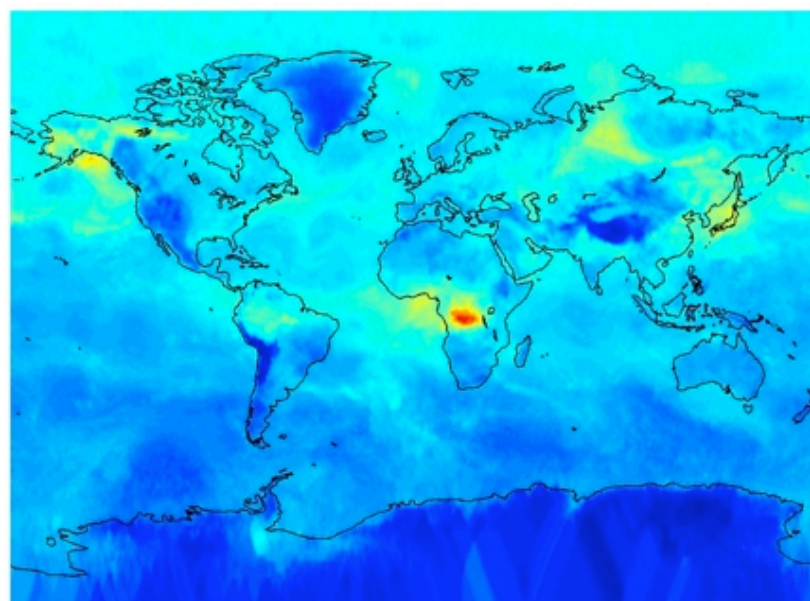
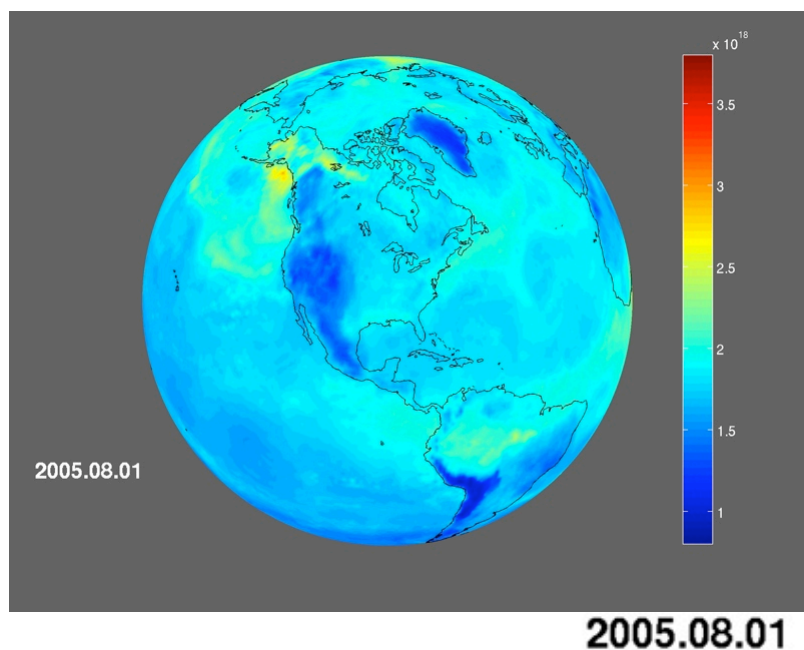


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TIME SERIES ANIMATIONS

CO, Water Vapor, OLR, Surf Skin Temp, Total Ozone, Cloud Fraction



V507, 2 Projections

BAMS

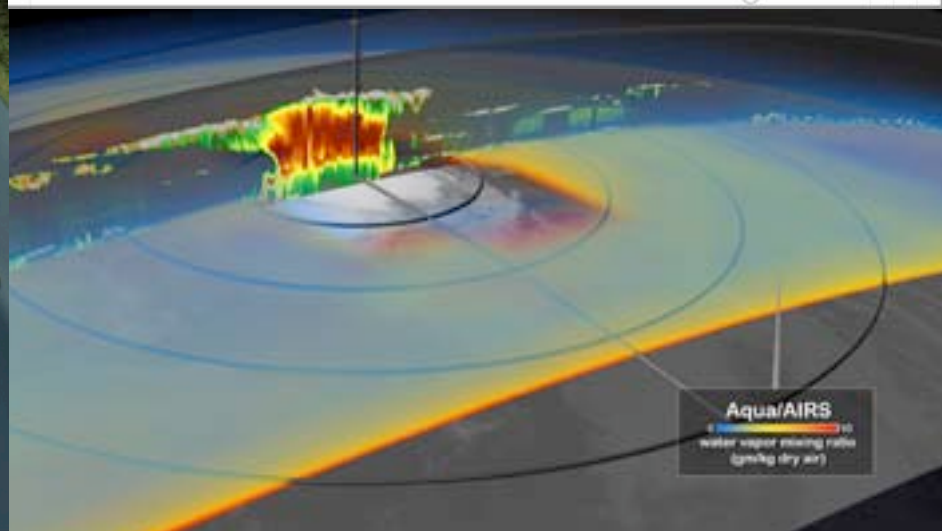
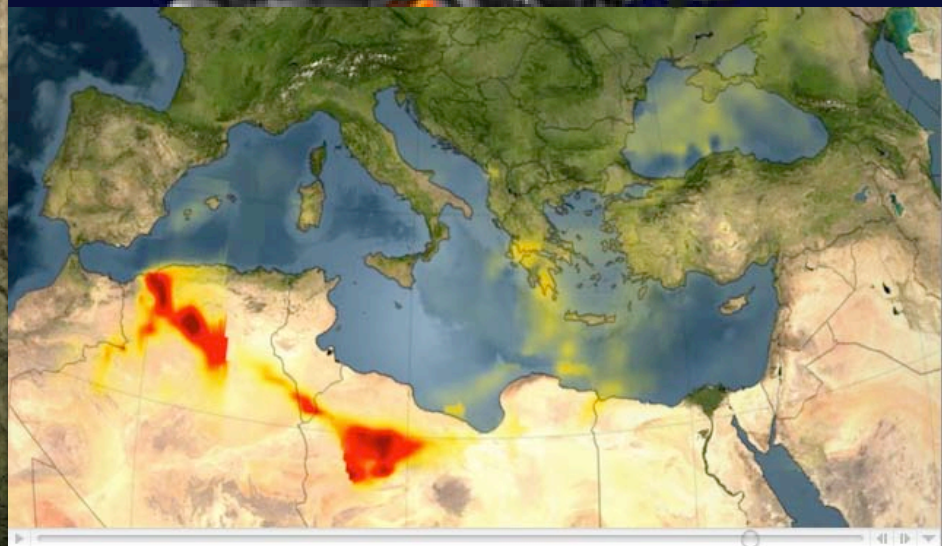
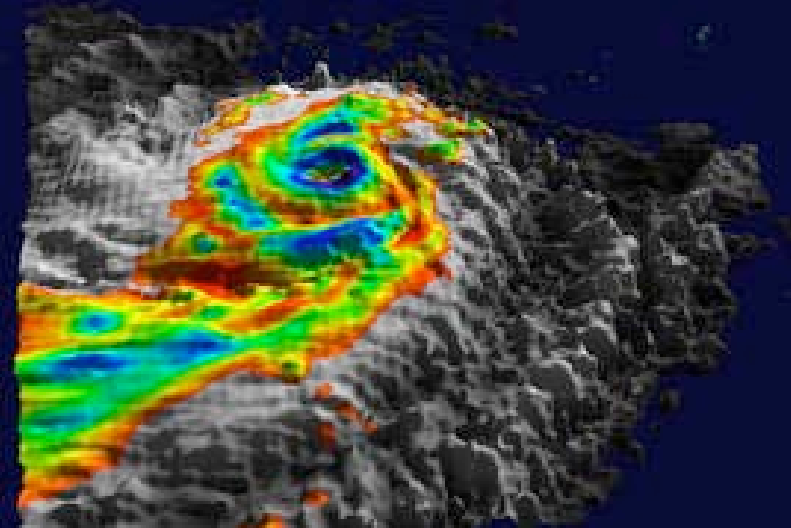
Bulletin of the American Meteorological Society

INTEGRATED GLOBAL DATASET

ABOARD HIAPER

SOUTHERN AFRICAN CLIMATE

AIRS
OBSERVING
THE GLOBAL
ATMOSPHERE
IN 3-D





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AIRS OUTREACH

SVS TOUR

SCIENTIFIC VISUALIZATION STUDIO

THURSDAY, OCTOBER 11 @ 6PM
GODDARD BUILDING 28 ROOM S121

- 20 attendees can be accommodated
- sign up list & maps at the badge table

The SVS will show a variety of Earth science visualizations with a spotlight on AIRS visualizations. This may inspire you with fresh ideas about visualizing your data.